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ABSTRACT

This publication, a pamphlet included in the B'nai B'rith Occupational Brief Series, directs itself to that profession that deals with medicinal substances. The pharmacist is responsible for the preparation and distribution of drugs. Fields of specialization are briefly described, identifying the nature of work involved. Licensure is required and given some attention in this publication. Personal qualifications are given and educational requirements are summarized. Opportunities for women in pharmacy are growing. Employment outlook, advantages and disadvantages, opportunities for Jewish and other minorities are discussed. Schools of pharmacy accredited by the American Council on Pharmaceutical Education are listed with their mailing address included. A bibliography is also included. (EB)

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careers in pharmacy

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CAREERS IN PHARMACY

by **FRED B. GABLE, B.S., M.S., M.A.**

Assistant Dean and Associate Professor of Pharmacy
Temple University, Philadelphia, Pennsylvania

HISTORY OF FIELD

MAN HAS ALWAYS been concerned with the subject of health, for without good health he has very little. Although the first pharmacy about which we know was operated in Baghdad in the eighth century, the practice of brewing drugs and potions to help cure human ailments is as old as civilization itself. There is no known society which did not have some sort of medicine man, witch, or voodoo doctor, whose purpose was to chant incantations and compound the magic potions that would relieve distress or postpone death. In many civilizations, the medicine man was both physician and pharmacist. In the tradition of Western society, however, the two professions were separated by royal edict in 1240 A.D. At that time Emperor Frederick II of the Holy Roman Empire declared that thereafter the two practices should be carried on apart.

In certain Oriental countries there still is no separation between medicine and pharmacy. Even now, the practice of medicine may be combined with that of pharmacy. The doctor will compound the ingredients with which he plans to cure the patient's illness.

The word "pharmacist" itself can be traced to the early Greeks. During the time of Aristotle, men who compounded drugs were called "pharmakons." The word came down the ages in a direct line to our day. It has changed little from its original form and still means approximately the same thing: one who compounds drugs

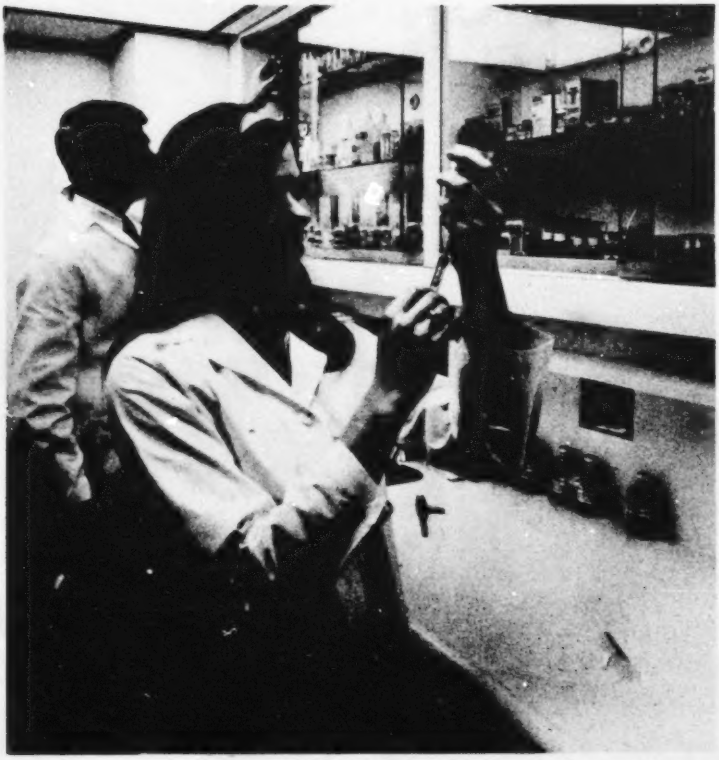
and medicines. Although early medicines were the product of superstition or accident, there are some which were valuable generations ago and are still of value today. The monks of the Middle Ages carefully preserved the chemical formulas of their time in large books known as pharmacopoeias. Medical libraries were first established in monastaries.

Pharmacy as a profession grew slowly in the United States. It is said that one of our earliest pharmacists was Governor Winthrop of Massachusetts Bay Colony. He learned to compound drugs because there were no other resources in the colony for obtaining medicines. The first school established to teach pharmacy in this country was the Philadelphia College of Pharmacy, founded in 1821. This date was more than 200 years after the landing of the Pilgrims at Plymouth Rock.

Since 1900, the life span in the United States has increased by more than twenty-three years . . . all within our present century. The profession of pharmacy has contributed significantly to this progress and to the defeat of suffering and disease.

NATURE OF WORK

TODAY'S MODERN PHARMACIST is truly a drug and medication expert. He is the most knowledgeable member of the health science team when it comes to drugs and their chemistry, description, dosage forms, toxicity, side effects, and actions on the body. Pharmacy may be defined as a profession that deals with medicinal substances. However, this broad definition does not clearly separate the role of the pharmacist from that of the physician, for both practitioners deal with medicinals. The physician is primarily concerned with the diagnosis and treatment of disease. The pharmacist is responsible for the preparation and distribution of the drug that will be used to *combat* the diagnosed disease. Because of his vast knowledge of drugs, he is consulted by physicians about new and existing pharmaceuticals and by the many people who enter a community pharmacy daily. The pharmacist is the one member of the health science team who usually communicates with the greatest number of people in any single day. The principal responsibility of the pharmacist involves the act of dispensing the drug, which has been selected by the physician, to the patient. The patient who enters a pharmacy with a prescription in hand carries a valueless piece of paper that has been made priceless by what is written on it. It is specifically the name of a drug that may mean the difference between health or disease or even life or death. It is



A pharmacist working in a special pharmaceutical products laboratory.
University of Maryland School of Pharmacy, Baltimore, Md.

the duty of the pharmacist to provide the patient with the exact medication that has been prescribed by the doctor.

FIELDS OF SPECIALIZATION

THERE ARE NOW MORE THAN 13,000 MEN AND WOMEN practicing pharmacy in a hospital setting. The duties of a hospital pharmacist are different in many respects from those of a community pharmacist. The hospital pharmacist dispenses drugs to clinic patients but he does not sell patent medicines. Drugs not commonly requested in neighborhood pharmacies, such as injectable medications, must be prepared and sterilized by special techniques. The pharmacist in charge of a hospital pharmacy has numerous administrative duties and helps in the planning of policies and procedures set forth by

the hospital. He is consulted frequently by nurses and doctors to provide information about medications. The hospital pharmacist may be considered an administrator, researcher, manufacturer and dispenser of special drugs, teacher of hospital personnel, and supervisor of several staff pharmacists.

Industrial pharmacy may be broadly defined as that area of enterprise concerned with the manufacturing of a product that is to be utilized as a therapeutic agent. Pharmacists have found employment in approximately 1,300 drug industry firms in the United States. The pharmacist may work in the tablet department or in the ointment section. He or she may be concerned with the development of flavoring or coloring agents. The pharmacist may assist in experiments involving the determination of drug action on experimental animals. It is hardly possible to enumerate the countless assignments in which the pharmacist may be involved as a member of the industrial research team. The pharmacist employed by industry as a medical service representative is assigned the task of promoting and helping to sell the products made by his employer. This individual is sometimes referred to as a "detail" man. His job is to visit physicians, osteopaths, and pharmacists and provide them with details about various drug products. Detailing is an interesting and challenging career that provides a valuable service to the medical profession. Doctors look forward to receiving the latest medical information which can be extremely valuable to their patients' welfare.

Careers in government service for the pharmacist are varied. They include opportunities in the Armed Forces, United States Public Health Service, Food and Drug Administration, Bureau of Narcotics and Dangerous Drugs, Veterans Administration and the Peace Corps. Pharmacists are recruited by the United States Public Health Service as commissioned officers only. Most of the officer pharmacists serve as pharmacists in hospitals of the U. S. Public Health Service. Others have been assigned active duty in association with the Office of Health Mobilization, Division of Radiological Health, Divisions of Sanitary Engineering Services, International Health, Biologic Standards and Administrative Services.

The pharmacy graduate who is talented as a writer may find career opportunities in the field of pharmaceutical journalism. The profession of pharmacy is represented by more than 30 national journals, magazines, or news sheets and by more than 55 state or local publications. In addition, drug manufacturers publish health magazines that are designed for distribution to patients as well as

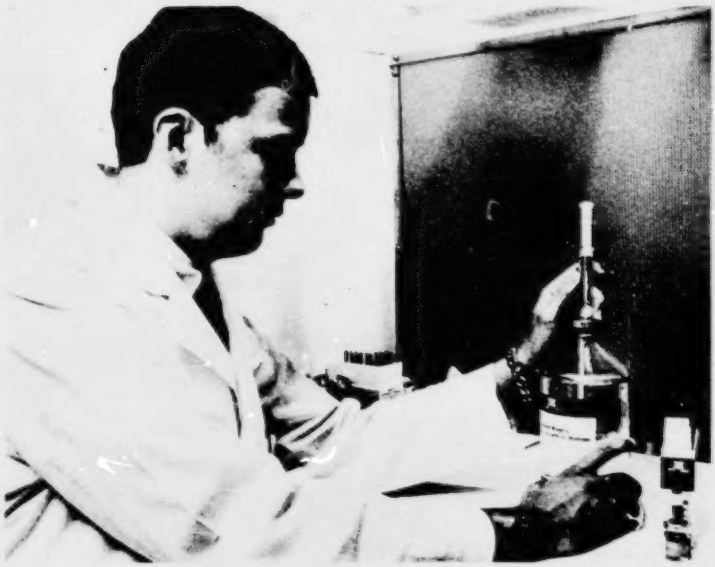
physicians. The pharmacist with an imaginative flair for writing is ideally suited for pharmaceutical journalism.

Some pharmacists have found employment in library service divisions of drug manufacturers. A pharmacist in this area is responsible for providing scientists with drug information and is challenged every day with different assignments. Understanding technical terms in the pharmaceutical sciences is a great asset to the pharmacist-librarian. The longer one works in library service the more valuable that person becomes to the company. As time goes by, the pharmacist-librarian is able to collect data all the faster. His proficiency increases with greater familiarity of the literature of pharmaceutical chemistry, pharmacology and related sciences.

The seventy-four schools of pharmacy in the United States require services of qualified teachers. Today there are approximately 15,000 students seeking undergraduate degrees and 2,000 students seeking Master's and Doctor of Philosophy Degrees in schools of pharmacy. The pharmacy graduate who aspires to a career in pharmaceutical education will have to continue studies beyond the bachelor's degree in order to qualify for this advanced

The hospital pharmacist prepares drugs not commonly requested in the community pharmacy such as injectable medications, ophthalmological solutions, and bulk quantities of various solutions and ointments.

Temple University School of Pharmacy, Philadelphia, Pa.



position in the pharmacy profession. Very few pharmacy students ever visualized themselves as professors. Primary motivation may be the practice of pharmacy itself . . . and as the student progresses, the desire to teach may appear.

The profession of pharmacy offers considerable opportunity in the area of administration. Pharmacy administration relates to the management of some phase of the pharmacy profession. It has enormous dimensions, considering the number of pharmaceutical industries, associations, publications, governmental agencies, pharmacy schools, and community and hospital pharmacies.

Some specialties within the profession of pharmacy have been briefly reviewed. Members of the diversified profession include the: (1) community pharmacist; (2) hospital pharmacist; (3) industrial pharmacist; (4) medical service representative; (5) pharmacy journalist; (6) pharmacy librarian; (7) government pharmacist; (8) pharmacy educator; (9) pharmacy administrator; (10) research pharmacist.

LICENSURE

PHARMACY GRADUATES MUST MEET REQUIREMENTS for licensure as defined by the laws of the state in which they wish to practice community or hospital pharmacy. Specialties within the profession of pharmacy such as industrial pharmacy, research, medical service representative, etc. do not require licensure. The new pharmacy graduate must present credentials indicating graduation from a school of pharmacy. He must pay fees to the state in order to take the qualifying examination and then successfully pass the examination that is administered by the state authority. Most states require a written examination and an examination of performance. The written examination determines the student's knowledge of information that had been presented during his college career. The examination of performance or "applicatory" test must be conducted in a setting where the candidate can demonstrate his proficiency of laboratory technics. It may include preparation of such pharmaceuticals as ointments, powders, solutions and tablets.

PERSONAL QUALIFICATIONS

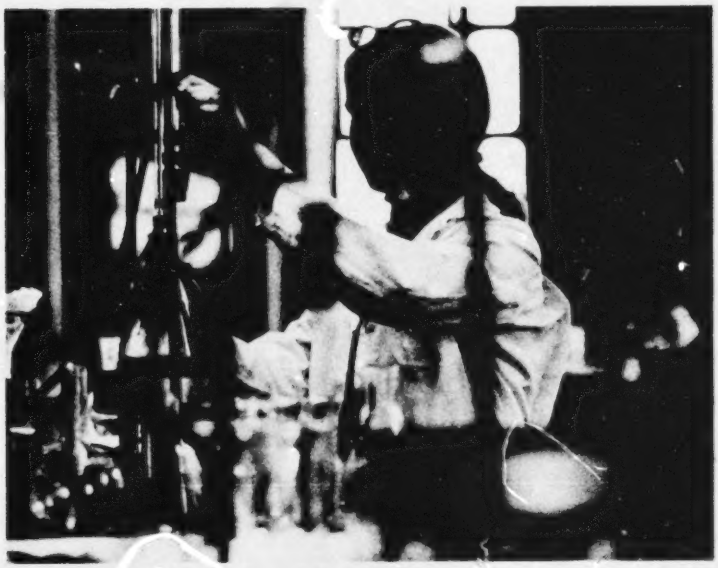
A YOUNG MAN OR WOMAN interested in science, healing arts, working with people, serving the community, and contributing to

public welfare may do well to investigate the profession of pharmacy as a career choice. The pharmacist usually communicates with an enormous number of people in a single day. He or she must enjoy dealing with members of the community: sick people hoping to restore good health and normal people hoping to maintain good health. Enjoyment in meeting the public . . . old people, children, parents . . . is a prerequisite for success as a community pharmacist.

WOMEN IN PHARMACY

VARIOUS SURVEYS REPORT that approximately 8% of all pharmacists are female. The percentage of females within the profession is rapidly increasing. The academic year 1967-68 showed a 22% increase of women students in pharmacy schools over the previous year. Today, women account for 20% of total enrollment in schools of pharmacy in the United States. Female pharmacists find it relatively easy to interrupt a career to marry and raise a family. Once their children are of school age, they can return to practice. Pharmacist-mothers find employment opportunities as "relief" pharmacists practicing several nights a week in different pharmacies so

Here a pharmacist is involved in laboratory work with medicinal chemistry.
University of Maryland School of Pharmacy, Baltimore, Md.



that the owners of those pharmacies may have an evening off.

EDUCATIONAL REQUIREMENTS

SINCE 1960, five years of collegiate studies are necessary for the awarding of the Bachelor of Science Degree in Pharmacy. The five-year program of study varies from one school of pharmacy to another. The three available plans have been referred to as the 0-5 program, 1-4 program and the 2-3 program. In the first plan, the student studies in a school of pharmacy for five years. In the second program, the student takes one year of liberal arts in a community, junior or liberal arts college and transfers to a school of pharmacy for four years. In the third plan, the student studies two years in a liberal arts college and transfers to the school of pharmacy for three years. The preprofessional concept of education has been introduced into pharmaceutical education. Schools of medicine, dentistry, and law require preprofessional studies before admitting students.

A basic secondary school requirement is that a student enroll in the academic or college preparatory curriculum of his high school. The usual academic program satisfies admission requirements to accredited liberal arts colleges, junior colleges, community colleges or schools of pharmacy should the student elect to attend a pharmacy school in which all five years of study are taught.

EMPLOYMENT OUTLOOK

LIKE SO MANY OTHER MEMBERS of the health profession, the pharmacist can be confident that his services are greatly needed. The demands for pharmacists will increase in the future. He also knows that his profession is an honored and respected one. He will receive recognition for his contributions and responsibility to the people he serves.

Because of the rapid advances in pharmaceutical science, this profession continues to create jobs at a phenomenal rate. New graduates can find work readily as thousands of openings appear each year in pharmacy. The expanding population—coupled with an increase in the average life span—contributes to an ever increasing demand for pharmacists to help maintain health standards. The profession of pharmacy has contributed significantly to this progress and the defeat of disease.

Most new pharmacy graduates will probably find employment readily through the 1970's. From 3,500 to 4,000 openings will

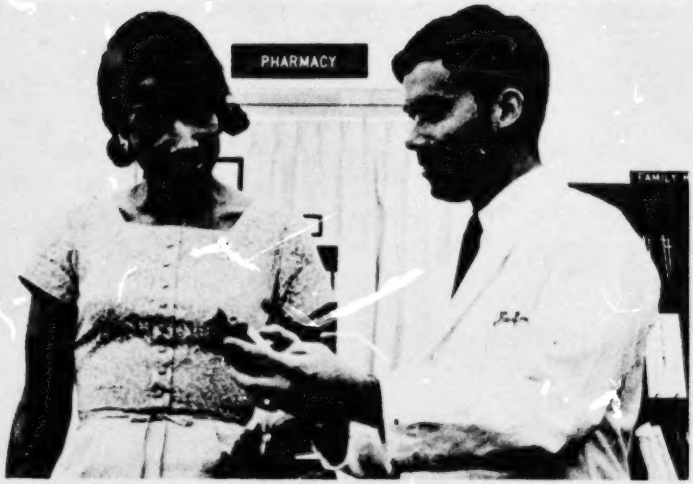
arise each year as pharmacists retire, die, or transfer out of the profession. These openings, together with the anticipated gradual increase in new positions for pharmacists, are expected to provide enough employment opportunities to absorb each year's graduates.

Some employment growth for pharmacists will result from the establishment of new pharmacies, particularly in residential areas or suburban shopping centers; the country's expanding population —especially the growing number of older people and children; and the rising standard of medical care. Many pharmacies may hire additional pharmacists because of a trend towards shorter working hours. Continued expansion in the manufacture of pharmaceutical products and in research are expected to provide more opportunities for pharmacists, not only in production and research, but also in distribution and sales positions. Employment in hospitals will probably rise with the construction of additional facilities and the more extensive use of pharmacists for hospital work. Pharmacists with graduate education will be needed for college teaching and laboratory research.

ADVANTAGES AND DISADVANTAGES

ONE OF THE MOST IMPORTANT ADVANTAGES in a career in pharmacy is that it offers a choice of several different types of work opportunities with attractive starting salaries. In each of the several outlets, too, there is excellent opportunity for advancement and increases in income. This is especially true in the community pharmacy where the pharmacist's success depends largely upon his own efforts. Moreover, it is a professional field that serves the health needs of the community and commands the respect and concern of the public. The education required is not any longer and indeed, sometimes shorter than that in other professional fields. However, a recent survey showed that two years after college, the pharmacist had the best starting salary of any bachelor degree recipient in the United States. Future salary progress, of course, depends on ability and experience.

A disadvantage to a career in pharmacy is that it may involve, especially in community practice, long working hours. Your own experience tells you that emergencies do not wait; pharmaceutical service may be required at 2:00 A.M. as well as 2:00 P.M. As a result, pharmacists expect to make their service available to the public at hours other than those you might think of as "normal" for professional people. Except for the true emergency where time isn't measured for time's sake, the pharmacist's work week prob-



A senior pharmacy student explains the labeling directions to an "outpatient" to insure proper administration of the medication.
Temple University School of Pharmacy, Philadelphia, Pa.

ably averages around forty-eight hours. In hospitals, pharmacists average forty to forty-four hours a week.

One basic concern of those interested in pursuing a career in pharmacy may be the opportunity for advancement. Owners of pharmacies sometimes begin their careers as pharmacists working for others. From such starts, men of integrity, talent and energy have become owners of one or more pharmacies or have sometimes formed chains of pharmacies. Not only does this apply to opportunities for community pharmacy, the same is true for other fields in pharmacy.

All of these bring rewards—tangible in the form of salaries, intangible in the sense of service, pride, recognition, and psychic satisfaction.

OPPORTUNITIES FOR JEWISH AND OTHER MINORITY GROUP YOUTH

TODAY IN THE FIELD OF PHARMACY, there are intensive programs designed to seek out and employ members of minority groups, institute training programs, make scholarships and loans available, and promote from within according to ability.

Religious or minority group discrimination in the field of phar-

macy is the exception rather than the rule. This is due primarily to the combined efforts of professional counselors assisting youth today. Also enlightened business communities, work of civil rights agencies, such as the Anti-Defamation League of B'nai B'rith, and the enactment of federal, state and local anti-discrimination laws have made this an attractive and non-discriminatory profession.

In the *College and Career Plans of Jewish High School Youth*, a research study conducted by the B'nai B'rith Vocational Service in cooperation with B'nai B'rith Women, approximately 75 per cent of the boys surveyed indicated they hoped to enter professional and technical occupations, and 7 per cent indicated executive, managerial and administrative occupations. More than 75% of the girls surveyed, hoped eventually to enter professional or technical occupations. Thus, many Jewish youth were headed toward occupational categories including the field of pharmacy.

FINANCIAL AID

THE QUALIFIED HIGH SCHOOL STUDENT who is unable to attend a college because of financial difficulty may have only himself to blame for not investigating the availability of such assistance. Too often scholarships or other student aids are not received because of late application. Parents should consult employers, and local and state government representatives should be contacted for information about available scholarships. Many students have received student aid from the American Foundation for Pharmaceutical Education and the John Dargavel Foundation of the National Association of Retail Druggists. Numerous chain stores of pharmacy have made scholarships and loans available to students in schools of pharmacy. The Health Professions Scholarship and Loan Programs have provided thousands of students with funds through the Health Professions Educational Assistance Act Amendments of 1965. This is a federal program designed to help talented students from low income families who wish to pursue courses of professional study to degrees in medicine, optometry, pharmacy and other health fields.

There are also a number of scholarship references guides available, such as *Scholarships, Fellowships and Loans* by Dr. S. Norman Feingold (published by Bellman Publishing Company, Cambridge, Mass. 02138). This series lists a large number of student aids available throughout the country. The same company publishes SCHOLARSHIPS, FELLOWSHIPS AND LOANS NEWSLETTER, a quarterly publication which provides the most

current information for financial aid seekers.

EARNINGS

NOT ALL VOCATIONS OFFER the participant the opportunity of deriving great personal satisfaction in addition to monetary gain. Pharmacy is a profession that provides gratification to its members as well as monetary gain. Recent graduates of schools of pharmacy have been offered annual incomes in the range of $10,000 to $14,000, depending upon whether the graduate wished to relocate and also upon how many hours a week the pharmacist wished to work. A 1968 salary survey for hospital pharmacists showed that the median salary for chief hospital pharmacists is $10,760. Industrial incomes range from $9,000 to $20,000 and up depending entirely upon qualifications and experience of the employee.

Salaries for pharmacists in community pharmacy may range from $10,000 for a starting pharmacist to $40,000 to $50,000 or more annually for one who has successfully developed his own practice. The need is great. Graduates of pharmacy schools across the country have no trouble finding a job that satisfies their personal goals, for there are many more openings than there are graduates to fill them.

OTHER INFORMATION AND ASSISTANCE

MANY YOUNG PEOPLE find educational and vocational counseling helpful in choosing a career. If you are interested in determining your assets and limitations, you may wish to avail yourself of counseling services in your own school, or a number of agencies that provide professional counseling services. You may wish to get in touch with one of the B'nai B'rith Vocational Service field offices, or any counseling agency approved by the American Board on Counseling Services located in your geographical area. Counseling can help you in exploring your abilities, interests and aspirations so that you can be more confident your vocational choice is an appropriate one.

A list of these agencies, approved by the American Board on Counseling Services, is published in their *Directory of Approved Counseling Agencies*. Copies of this book are in many public and private libraries. Some of the reading listed in the bibliography of this career brief may also be helpful in providing background information related to this profession.

THE BULLETIN OF A SCHOOL OF PHARMACY contains information pertaining to specific admission requirements, tuition, curriculum, dormitory accommodations, and financial assistance. Students planning to pursue a career in pharmacy should communicate with a school of pharmacy at the beginning of their senior year in high school to insure proper guidance in meeting admission requirements.

The following schools of pharmacy hold membership in the American Association of Colleges of Pharmacy and are accredited by the American Council on Pharmaceutical Education.

Alabama

Auburn University
School of Pharmacy
Auburn, Alabama 36830

Samford University
School of Pharmacy
800 Lakeshore Drive
Birmingham, Alabama 35209

Arizona

University of Arizona
College of Pharmacy
Tucson, Arizona 85721

Arkansas

University of Arkansas
School of Pharmacy
Medical Center
Little Rock, Arkansas 72201

Clinical pharmacy is a course now being taught in many schools of pharmacy which permits the student to relate to the patient. Here some pharmacy students make the "rounds" with medical interns.

Temple University School of Pharmacy, Philadelphia, Pa.

California

University of California
School of Pharmacy
Medical Center
San Francisco, California 94122

University of the Pacific
School of Pharmacy
Stockton, California 95204

University of Southern California
School of Pharmacy
3518 University Avenue
Los Angeles, California 90007

Colorado

University of Colorado
School of Pharmacy
Boulder, Colorado 80302

Connecticut

University of Connecticut
School of Pharmacy
Storrs, Connecticut 06268

District of Columbia

Howard University
College of Pharmacy
Washington, D. C. 20001

Florida

Florida Agricultural and Mechanical University
School of Pharmacy
Tallahassee, Florida 32307

University of Florida
J. Hillis Miller Health Center
College of Pharmacy
Gainesville, Florida 32601

Georgia

Mercer University
Southern School of Pharmacy
223 Walton Street, N.W.
Atlanta, Georgia 30303

University of Georgia
School of Pharmacy
Athens, Georgia 30601

Idaho

Idaho State University
College of Pharmacy
Pocatello, Idaho 83201

Illinois

University of Illinois at the Medical Center
College of Pharmacy
833 South Wood Street
Chicago, Illinois 60680

Indiana

Butler University
College of Pharmacy
Indianapolis, Indiana 46207

Purdue University
School of Pharmacy and Pharmacal Sciences
Lafayette, Indiana 47907

Iowa

Drake University
College of Pharmacy
25th & University Avenues
Des Moines, Iowa 50311

University of Iowa
College of Pharmacy
Iowa City, Iowa 52240

Kansas

University of Kansas
School of Pharmacy
Lawrence, Kansas 66044

Kentucky

University of Kentucky
College of Pharmacy
Lexington, Kentucky 40506

Louisiana

Northeast Louisiana State College
School of Pharmacy
Monroe, Louisiana 71201

Xavier University of Louisiana
College of Pharmacy
7325 Palmetto Street
New Orleans, Louisiana 70125

Maryland

University of Maryland
School of Pharmacy
636 W. Lombard Street
Baltimore, Maryland 21201

Massachusetts

Massachusetts College of Pharmacy
179 Longwood Avenue
Boston, Massachusetts 02115

Northeastern University
College of Pharmacy
360 Huntington Street
Boston, Massachusetts 02115

Michigan

Ferris State College
School of Pharmacy
Big Rapids, Michigan 49307

University of Michigan
College of Pharmacy
Ann Arbor, Michigan 48104

Wayne State University
College of Pharmacy
Detroit, Michigan 48202

Minnesota

University of Minnesota
College of Pharmacy
Minneapolis, Minnesota 55455

Mississippi

University of Mississippi
School of Pharmacy
University, Mississippi 38677

Missouri

St. Louis College of Pharmacy
4588 Parkview Place
St. Louis, Missouri 63110

University of Missouri at
Kansas City
5100 Rockhill Road
Kansas City, Missouri 64110

Montana

University of Montana at Missoula
School of Pharmacy
Missoula, Montana 59801

Nebraska

Creighton University
School of Pharmacy
1406 Davenport Street
Omaha, Nebraska 68102

University of Nebraska
College of Pharmacy
Lincoln, Nebraska 68508

New Jersey

Rutgers, The State University
College of Pharmacy
1 Lincoln Avenue
Newark, New Jersey 07104

New Mexico

University of New Mexico
College of Pharmacy
Albuquerque, New Mexico 87106

New York

Columbia University
College of Pharmaceutical Sciences
in the City of New York
115 West 68th Street
New York, New York 10023

Fordham University
College of Pharmacy
Bronx, New York 10458

Long Island University
Brooklyn College of Pharmacy
600 Lafayette Avenue
Brooklyn, New York 11216

St. John's University
College of Pharmacy
Grand Central & Utopia Parkways
Jamaica, New York 11432

State University of New York
at Buffalo
School of Pharmacy
Buffalo, New York 14214

Union University
Albany College of Pharmacy
106 New Scotland Avenue
Albany, New York 12208

North Carolina

University of North Carolina
at Chapel Hill
School of Pharmacy
Chapel Hill, North Carolina 27515

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Ada, Ohio 45810

Ohio State University
College of Pharmacy
500 West 12th Avenue
Columbus, Ohio 43210

University of Cincinnati
College of Pharmacy
Cincinnati, Ohio 45221

University of Toledo
College of Pharmacy
2801 Bancroft Street (West)
Toledo, Ohio 43603

Oklahoma

Southwestern State College
School of Pharmacy
Weatherford, Oklahoma 73096

University of Oklahoma
College of Pharmacy
Norman, Oklahoma 73069

Oregon

Oregon State University
School of Pharmacy
Corvallis, Oregon 97331

Pennsylvania

Duquesne University
School of Pharmacy
Pittsburgh, Pennsylvania 15219

Philadelphia College of Pharmacy
and Science
43rd St. and Kingsessing Avenue
Philadelphia, Pennsylvania 19104

Temple University
School of Pharmacy
3223 North Broad Street
Philadelphia, Pennsylvania 19140

University of Pittsburgh
School of Pharmacy
3550 Terrace Street
Pittsburgh, Pennsylvania 15213

Puerto Rico

University of Puerto Rico
College of Pharmacy
Rio Piedras, Puerto Rico 09931

Rhode Island

University of Rhode Island
College of Pharmacy
Kingston, Rhode Island 02881

South Carolina

Medical University of South Carolina
College of Pharmacy
80 Barre Street
Charleston, South Carolina 29401

University of South Carolina
School of Pharmacy
Columbia, South Carolina 29208

South Dakota

South Dakota State University
College of Pharmacy
Brookings, South Dakota 57006

Tennessee

University of Tennessee
College of Pharmacy
Medical Units Division
874 Union Avenue
Memphis, Tennessee 38103

Texas

Texas Southern University
School of Pharmacy
3201 Wheeler Avenue
Houston, Texas 77004

University of Houston
College of Pharmacy
3801 Cullen Boulevard
Houston, Texas 77004

University of Texas
College of Pharmacy
Austin, Texas 78712

Utah

University of Utah
College of Pharmacy
Salt Lake City, Utah 84112

Virginia

Medical College of Virginia
School of Pharmacy
Richmond, Virginia 23219

Washington

University of Washington
College of Pharmacy
Seattle, Washington 98105

Washington State University
College of Pharmacy
Pullman, Washington 99163

West Virginia

West Virginia University
School of Pharmacy
Medical Center
Morgantown, West Virginia 26506

Wisconsin

University of Wisconsin
School of Pharmacy
Madison, Wisconsin 53706

Wyoming

University of Wyoming
College of Pharmacy
Laramie, Wyoming 82070

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